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(71) Applicant (for all designated States except US): **WATERS INVESTMENTS LIMITED** [US/US]; 34 Maple Street, Milford, MA 01757 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KEENE, Russell** [US/US]; 66 Beachwood Avenue, Sudbury, MA 01776 (US).

(74) Agent: **JANIUK, Anthony, J.**; Waters Corporation, 34 Maple Street, Milford, MA 01757 (US).

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(54) Title: A SELF-SETTING HIGH PRESSURE FITTING

(57) Abstract: A coupling element comprising a male sealing element is disclosed herein. The male sealing element comprises a first end, second end, and a longitudinal axis extending between the first and second end. The coupling element is housed within a nut. In one aspect, the male sealing element has a generally cylindrical shape. Also, the male sealing element defines a fluid passageway therethrough for the transmission of fluid. The male sealing element is secured to a ferrule which is located within a cavity of the nut. The first end of the male sealing element defines a conical sealing surface. In one aspect, the male conical sealing surface mates with a female sealing element which has a receptacle that is defined by a nearly complementary conical geometry. In this aspect, the male conical sealing surface has a mismatched angle when compared to the complementary conical female sealing element. The coupling element also has a biasing element disposed between a retaining ring and the ferrule located within the nut cavity. This biasing element facilitates a fluid-tight, metal to metal (or metal to plastic, or plastic to plastic) seal between the male sealing element and female sealing element.



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